DOCUMENT RESUME

ED 321 249 CS 010 181

AUTHOR Cousin, Patricia Tefft
TITLE Content Area Textbooks: Friends or Foes? ERIC Digest.
INSTITUTION ERIC Clearinghouse on Reading and Communication Skills, Bloomington, IN.
SPONS AGENCY Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE Aug 89
CONTRACT RI88062001
NOTE 3p.
AVAILABLE FROM ERIC Clearinghouse on Reading and Communication Skills, Indiana University, Smith Research Center, 2805 E. 10th St., Suite 150, Bloomington, IN 47408-2698 (Single copies free with a stamped self-addressed envelope).
PUB TYPE Information Analyses (070) -- Information Analyses - ERIC Information Analysis Products (071)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Content Area Reading; Elementary Secondary Education; *Reading Comprehension; Reading Research; Textbook Content; *Textbook Preparation; *Textbook Research; Theory Practice Relationship
IDENTIFIERS ERIC Digests; Textbook Design; *Text Factors

ABSTRACT

Research has indicated that current information about reading and the effective teaching of reading has not yet made much impact on content area textbooks. As a result, there is much room for improvement in how textbooks are written. Recent research has yielded a great deal of information about what makes a text more understandable and supportive to the student in learning concepts. Yet research in the area of text adaptation indicates that the process of revision is complex and cannot be addressed with simple solutions. Publishers also need to consider particularly the need for inclusion of additional graphics and attention not only to the content but also to the organization and style of the text. (Sixteen references are attached.) (RS)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ERIC® CLEARINGHOUSE ON READING AND COMMUNICATION SKILLS

August 1989 DIGEST

ED321249

Content Area Textbooks: Friends or Foes?

by Patricia Tefft Cousin

Walk into any upper elementary, junior high, or secondary classroom and ask the teacher to tell you about one of the main areas of difficulty that students with learning problems are having as they learn social studies or science. You will hear the same reply echoed from classroom to classroom, "reading the textbook." There are many reasons for this—some having to do with the text itself, such as its organization and format; some having to do with the students, and their reading competencies, background experiences, or interests; and, finally, some centering on the teacher, such as his or her competence in organizing and presenting the material.

Many of the attempts to address this problem have been to suggest that texts need to be adapted for students with learning difficulties or that there are special strategies and techniques that need to be used with these students which enhance their understanding of text material. One newer conclusion in this area is that features of a text that support the reading of students with learning difficulties also support those who are not having difficulties. Likewise, teaching strategies that support students having difficulty are also considered useful for all students (Larrivee, 1986; Wang, Reynolds, and Walberg, 1988). This is an important point since, as demographic projections indicate, we are now working with and will continue to work with more students at high risk for having learning difficulties in the future (U.S. Bureau of Census, 1983; 1985). We will need to consider effective ways to meet their needs within regular class settings (Wang, Reynolds, and Walberg, 1988).

Are Findings Applied?

Research has indicated that current information about reading and the effective teaching of reading has not yet made much impact on textbooks. As a result, there is much room for improvement in how textbooks are written (Armbruster and Gudbrandsen, 1986; Osborn, *et al.*, 1985). Several checklists, based on the application of this research, have been developed to assess textbooks (Armbruster and Anderson, 1981; Armbruster and Anderson, 1985; Singer, 1985). These checklists attempt to highlight features of texts that tend to make them more readable or, as Singer (1985) called them, "friendly" texts.

It stands to follow then that one focus of the research in this area has been to consider how to revise textbooks to make them more understandable. Studies considering the effect of revisions on improving comprehensibility have been inconclusive, with a few exceptions (see the review in Graves, *et al.*, 1988). This finding is attributed to the many factors which influence understandability. Those studies that have shown significant results are those which have manipulated many factors in the text and, thus, were not able to delineate any *one* critical factor.

Some approaches: readability, clarifications, graphics

One recent study in this area involved the revision of an expository text by text linguists, composition instructors, and former magazine editors. The most readable revisions were those done by the magazine editors. The study suggested that the most comprehensible texts were those in which attention was given to the structure, content, and style of the text (Graves *et al.*, 1988).

Another way of modifying the text has been to use abridgement and rewriting. Abridgement refers to eliminating subplots and details, while rewriting focuses on replacing words and syntactic structures with supposedly simpler versions. The problem has been that simplification may in some cases make a text more difficult to read because character contrasts are reduced and beliefs about the lexical difficulty of specific words often differ. Words that one individual judges as difficult are judged as easy by another (Campbell, 1987).

Another area of concern has been that texts tend not to address misconceptions that students commonly have about content area subjects. Two studies (Eaton, *et al.*, 1983; Smith, 1983), have examined students' misconceptions about scientific concepts and how texts often do not consider these areas. The latter study identified four broad categories of misconceptions and suggested that these areas be addressed in the student text and teacher manual.

Studies of effective textbook adaptations have included recommendations to include more graphics (Burnette, 1982). Herum (1982) found that revising texts to include more graphics and to make the text more explicit supported college students with learning difficulties. Bergerud, *et al.* (1988) compared the effectiveness of two types of textbook adaptations—graphics and study guides—for the purpose of self-study, with students identified as either low achievers or learning disabled. The use of graphics, consisting of diagrams with parts of pictures or labels missing, was found to be superior to the other approaches as measured by a retention test.

Findings of Special Projects

A project funded by the ERIC Clearinghouse on Handicapped and Gifted Children (Burnette, 1982) focused on the adaptation of several textbook-based curricula for the purpose of making them more appropriate for mainstreamed students. The adaptations included revising texts to include text aids such as, structured overviews, organiz-

Dr. Patricia Tefft Cousin is Assistant Professor of Graduate Programs in the School of Education at California State University—San Bernardino.

CS010181

ers, chapter summaries; the use of audiotapes; inclusion of manipulatives and games in the curriculum; and development of computer software. These adaptations were found to be appropriate within a regular classroom setting and improved the learning outcomes of *all* the students, not just those identified as special needs learners.

The Office of Special Education Programs (OSEP), of the U.S. Dept. of Education, funded a project which supported the collaboration of educators, researchers, and publishers for the purpose of improving the usability of textbooks, particularly for use with diverse groups of learners (Educational Development Center and RMC Research Corporation, 1988). The project involved conducting a review of the literature on learners and effective instruction, developing an instrument to analyze textbooks, evaluating textbooks using this instrument, developing a set of recommendations, and holding a conference involving the three groups to discuss the findings.

The instructional design of 12 elementary and secondary social studies and science textbook programs, with their ancillary materials, was reviewed. The questionnaire used to evaluate the texts was based on current information regarding the nature of learning and the characteristics of learners. The evaluation of the texts and recommendations for change were organized into three major areas including: 1) getting students ready to learn, 2) engaging students in the learning process, and 3) having students demonstrate competence and expand knowledge.

All of the programs reviewed were rated as visually appealing with good designs and graphics. However, it was reported that many of the ancillary materials were not well coordinated with the content of the lesson.

We already have a great deal of information about what makes a text more understandable and supportive to the student in learning concepts. Yet research in the area of text adaptation indicates that the process of revision is complex and cannot be addressed with simple solutions. However, research has also indicated that publishers do need to consider particularly the need for the inclusion of additional graphics and attention not only to the content, but also to the organization and style of the text.

References

Armbruster, Bonnie B., and Anderson, Thomas H. *Content Area Textbooks*. Reading Education Report No. 23. Cambridge, Massachusetts: Bolt, Beranek, and Newman, Inc.; Champaign, Illinois: Center for the Study of Reading, 1981.

Armbruster, Bonnie B., and Gudbrandsen, Beth. "Reading comprehension instruction in social studies programs," *Reading Research Quarterly*, 21, (1) 1986, pp. 36-48.

Bergerud, Donna, *et al.* "The effectiveness of textbook adaptations in life science for high school students with learning disabilities," *Journal of Learning Disabilities*, 21, (2) 1988, pp. 70-76.

Burnette, Jane. "Adapting instructional materials for mainstreamed students." Reston, Virginia: ERIC Clearinghouse on Handicapped and Gifted Children; Reston, Virginia: Council on Exceptional Children, 1987. 3 pp. [ED 297 557]

Campbell, Nancy. "Adapted literary texts and the EFL reading programme," *ELT Journal*, 41, (2) 1987, pp. 132-135.

Eaton, Janet F., *et al.* "Students' misconceptions interfere with learning: Case studies of fifth-grade students." East Lansing, Michigan: Institute for Research on Teaching, 1983. 32 pp. [ED 228 094]

Educational Development Center and RMC Research Corporation. *Improving textbook usability*. Conference Report, 1988.

Graves, Michael F., *et al.* "Some characteristics of memorable expository writing: Effects of revisions by writers with different backgrounds," *Research in the Teaching of English*, 22, (3) 1988, pp. 242-265.

Herum, John. "A college professor as a reluctant learner: Facing up to the learning disabled. Alternative techniques for teaching English composition to learning disabled students in the university." Ellensburg, Washington: Instructional Media Center, 1982, 36 pp. [ED 234 547]

Larrivee, Barbara. "Effective teaching for mainstreamed students is effective teaching for all students," *Teacher Education and Special Education*, 9, (4) 1986, pp. 173-179.

Osborn, J., *et al.* "The case for improving textbooks," *Educational Leadership*, 42 (7), 1985, pp. 9-16.

Singer, H. "Criteria for selecting friendly texts," In *Content Area Reading: Improving Classroom Instruction*, E. Dishner, *et al.* Eds.). Dubuque, Iowa: Kendall Hunt, 1985.

Smith, Edward L. "Teaching for conceptual change: Some ways of going wrong." Paper presented at the International Seminar on Misconceptions in Science and Mathematics, 1983, 26 pp. [ED 237 493]

U.S. Bureau of the Census. Projections of the population of the United States: 1982-2050. *Current Population Reports* Series P25 No. 922P Washington, D.C.: 1983.

U.S. Bureau of Census. *Statistical abstract of the United States*, 1986 (106th ed.) Washington, D.C.: U.S. 1985.

Wang, M. C. *et al. Handbook of Special Education: Research and Practice*. (Vols. 1-3). Oxford, England; Pergamon Press, 1987-1988.

ERIC Clearinghouse on
Reading and Communication Skills
Indiana University
Smith Research Center
2805 East Tenth Street, Suite 150
Bloomington, IN 47405
(812) 855-5847

This publication was prepared with funding from the Office of Educational Research and Improvement, U.S. Department of Education, under contract no. RI88062001. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions, however, do not necessarily represent the official view or opinions of the Office of Educational Research and Improvement.